WHAT IS CLAIMED IS:

1. A method for assessing the patency of a portion of a blood vessel in an animal comprising: (a) administering a fluorescent dye to the animal; (b) obtaining at least one angiographic image of the vessel portion; and (c) evaluating the at least one angiographic image to assess the patency of the vessel portion.

2. The method of claim 1, wherein the blood vessel is selected from the group consisting of coronary arteries, the peripheral vasculature, carotid arteries, intracranial vasculature and AV fistulas.

3. The method of claim 2, wherein the blood vessel portion is a bypass graft.

4. The method of claim 3, wherein the blood vessel is a coronary artery.

5. The method of claim 4, wherein step(b) is performed while the heart is beating.

6. The method of claim 1, wherein step (b) is performed during an invasive procedure.

7. The method of claim 6, wherein the vessel portion is a coronary artery.

8. The method of claim 6, wherein a plurality of images of the vessel portion are obtained during an invasive procedure in which a bypass graft is created in the vessel portion, and wherein a first angiographic image of the vessel portion is obtained prior to creation of the bypass graft and a second angiographic image of the vessel portion is obtained after the bypass graft.

9. The method of claim 8, wherein the first and second angiographic images are obtained while the heart is beating.

10. The method of claim 1, wherein the fluorescent dye is selected from the group consisting of ICG, analogue members of the tricarbocyanine dyes, and mixtures thereof.

11. The method of claim 10, wherein the fluorescent dye is ICG.

12. The method of claim 1, wherein a plurality of angiographic images is obtained during step (b).

13. The method of claim 12 further comprising displaying the plurality of angiographic images on a video monitor.

14. The method according to claim 13, wherein the plurality of angiographic images is obtained using a CCD camera.

15. The method of claim 14 further comprising storing the plurality of angiographic images on a recordable medium.

16. The method according to claim 15, wherein the plurality of images is obtained at least in part using an endoscope.

17. A method for assessing blood flow in a portion of animal tissue wherein the tissue is a candidate for an invasive procedure, is being or has been treated by an invasive procedure, comprising (a) identifying the portion of animal tissue; (b) administering a fluorescent dye to the animal; (c) obtaining at least one angiographic image of blood flowing through the tissue portion; and (d) examining the at least one angiographic image to assess blood flow in the tissue portion.

18. The method of claim 17, further comprising the step of obtaining at least one angiographic image of vasculature located downstream of the tissue portion treated by an invasive procedure, wherein the treated tissue portion is a blood vessel.

19. The method of claim 18, wherein the treated blood vessel is selected from the group consisting of coronary arteries and peripheral vasculature.

20. The method of claim 17, wherein step (c) is performed prior to an invasive procedure.

21. The method of claim 17, wherein step (c) is performed after an invasive procedure.

22. The method of claim 17, wherein step(c) is performed during an invasive procedure.

23. The method of claim 22, wherein the invasive procedure is a coronary artery bypass graft, and wherein the tissue portion is arterial vasculature located downstream of the graft.

24. The method of claim 21, wherein the invasive procedure is a peripheral bypass graft, wherein the tissue portion is vasculature located downstream of the graft, and wherein step (c) is performed in the absence of an incision in the skin overlaying the downstream vasculature.

25. The method of claim 17, wherein the tissue is selected from the group consisting of muscle, stomach, liver, heart, intestine, bladder, esophageal, lung, kidney, and brain tissue.

26. The method of claim 17, wherein a plurality of angiographic images is obtained during step (c).

27. The method of claim 26 further comprising displaying the plurality of angiographic images on a video monitor.

28. The method according to claim 27, wherein the plurality of angiographic images is obtained using a CCD camera.

29. The method of claim 27 further comprising storing the plurality of angiographic images on a recordable medium.

30. The method according to claim 28, wherein the plurality of images is obtained at least in part using an endoscope.

31. The method of claim 17, wherein the tissue comprises a tumor.

32. The method according to claim 17, wherein, the invasive procedure is completed at least in part using an endoscope.

33. The method of claim 17, further comprising: (e) obtaining at least one angiographic image of blood flowing through the tissue portion subsequent to the time at which the at least one image of step (c) is obtained; and (f) comparing the images obtained in steps (c) and (e) to assess any change in vascular density.

34. The method of claim 17, further comprising: (e) obtaining at least one angiogram of blood flowing through the tissue portion after the at least one image of step (c) is obtained and after the tissue portion is treated; (f) comparing the area of fluorescence in an image obtained in step (c) within a preselected area of the tissue portion with the area of fluorescence in an image obtained in step (e) within the preselected area of the tissue portion to assess the post-treatment relative blood flow in the tissue portion.

35. The method of claim 33, further comprising administering a therapeutic agent to the animal prior to step (e).

36. The method of claim 35, wherein the therapeutic agent comprises an anti-angiogenesis agent.

37. The method of claim 35, wherein the therapeutic agent comprises an angiogenesis agent.

38. The method of claim 17, wherein the fluorescent dye is ICG.

39. The method of claim 17, further comprising: (e) obtaining at least one angiogram of blood flowing through the tissue portion after the at least one image of step (c) is obtained and after the tissue portion is treated; (f) comparing the maximum average fluorescence in an image obtained in step (c) within a preselected area of the tissue portion with the maximum average fluorescence in an image obtained in step (e) within the preselected area of the tissue portion to assess the post-treatment relative blood flow in the tissue portion.

40. A method for locating at least one vessel residing beneath the surface of vascularized animal tissue comprising: (a) administering a fluorescent dye to the animal; (b) obtaining at least one angiographic image of the vasculature located beneath the surface of the tissue; and (c) examining the at least one angiographic image to locate at least one vessel residing beneath the surface of the tissue.

41. The method of claim 40, wherein the at least one vessel is a coronary artery.

42. The method of claim 40, wherein the tissue is skin, and step (b) comprises obtaining at least one angiographic image of a peripheral vessel in the absence of an incision in the skin overlaying the vasculature.

43. The method of claim 42, wherein during step (c), the at least one image is examined to locate vessels suitable for use in the creation of an AV fistula.

44. The method of claim 43, wherein during step (c), the at least one image is further examined to assess the type of AV fistula that may be created.

45. The method of claim 40, wherein the fluorescence dye is ICG.

46. The method of claim 40, wherein step (b) is performed while the heart is beating.

47. The method of claim 40, wherein a plurality of angiographic images is obtained during step (b).

48. The method of claim 47 further comprising displaying the plurality of angiographic images on a video monitor.

49. The method according to claim 48, wherein the plurality of angiographic images is obtained using a CCD camera.

50. The method of claim 48 further comprising storing the plurality of angiographic images on a recordable medium.

51. The method according to claim 48, wherein the plurality of images is obtained at least in part using an endoscope.

52. A device for determining the diameter of a blood vessel comprising

a device comprising a laser that emits radiation capable of causing fluorescent dye flowing within a blood vessel;

a camera capable of capturing the radiation emitted by the fluorescing dye within the blood vessel as an angiographic image comprised of a plurality of pixels; and

a computer comprising a software program that calculates the diameter of a blood vessel by comparing the number of pixels that correspond to the blood vessel diameter with the number of pixels associated with a preselected unit of measurement.